

Notice of Allowability

Application No.

09/862,689

Applicant(s)

BEUTLER ET AL.

Examiner

Alexander Jamal

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment 5-25-2005.
2. ☒ The allowed claim(s) is/are 1,3-9,11-22,24,25 and 27-31.
3. ☒ The drawings filed on 21 May 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☒ Other PTO-413B.

CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 900

DETAILED ACTION

Response to Applicant's Amendment

1. Based upon the RCE and submitted amendments received 5-25-2005, examiner notes that claims 1,4,8,19,29 have been amended, claims 32-35 have been added, and claims 2,10,23,26 have been cancelled.
2. Based upon the examiner amendment below, examiner withdraws all objections and rejections to all claims.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Christopher J. Rourk, Esq. (reg. number 39,348) on July 20th, 2005.

The application has been amended as follows:

Claims 32-35 have been cancelled.

Claim 1 has been amended to:

1. A high voltage isolation barrier structure, comprising:
a circuit board comprising a substrate, the substrate comprising a first side and a

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second side, the first side having a first circuitry and a second circuitry;

a capacitive structure comprising:

a plurality of first electrodes disposed on the first side of the substrate;

a plurality of second electrodes disposed on the second side of the substrate;

a plurality of conductive vias through the substrate; and

wherein the substrate intermediate the plurality of first and second electrodes functions as a dielectric material within the capacitive structure; and

the plurality of first electrodes is electrically coupled to said first circuitry; and

the plurality of conductive vias electrically couples the plurality of second electrodes to the second circuitry; and

the circuit further comprises a substrate having a first substrate and a second substrate, and the capacitive structure comprises:

a first electrode disposed on a first side of the first substrate;

a second electrode disposed on a first side of the second substrate;

a third electrode disposed on a second side of the first substrate and the second substrate, where the first substrate is stacked on top of the second substrate;

a first conductive via through the first substrate, the third electrode, and the second substrate connecting the first electrode and the second electrode and including a high voltage isolation barrier between the first conductive via and the third electrode;

a second conductive via through one of the first substrate or the second substrate

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connecting to the third electrode; and

wherein the substrate intermediate the first, second and third electrodes functions as a dielectric material within the capacitive structure.

Claim 8 has been amended to:

8. A data access arrangement, comprising:

a circuit board having a substrate with a first side and a second side;

a conductive via through the substrate;

a high voltage isolation capacitor having a first electrode formed on the first side of the substrate and a second electrode formed on the second side of the substrate;

system side circuitry coupled to the first electrode and located on the first side; and

line side circuitry coupled to the second electrode and located on the first side;

wherein the conductive via couples the second electrode to the line side circuitry;

a third electrode contained within the substrate; and

wherein the conductive via through the substrate also extends through the third electrode and includes a high voltage isolation barrier between the via and the third electrode, the first electrode formed on the first side is electrically connected to the second electrode formed on the second side of the substrate, and the capacitor is formed between the first electrode and the second electrode as a first terminal and the third electrode as a second terminal.

Claim 19 has been amended to:

19. A method of manufacturing a communications device, comprising:

providing a circuit board having at least one substrate with a first side and a second side;

forming a first electrode on the first side of the substrate;

forming a second electrode on the second side of the substrate, wherein the substrate intermediate the first and second electrodes functions as a dielectric material such that a capacitive structure is formed;

forming a conductive via through the substrate;

electrically coupling first communication circuitry to the first electrode, the first communication circuitry being located on the first side; and

electrically coupling second communication circuitry to the second electrode by the conductive via, the second communication circuitry being located on the first side;

wherein forming the capacitive structure further comprises:

forming a third electrode interior to the substrate;

forming a via through the substrate and the third electrodes wherein the via electrically connects the first and second electrodes and provides a high voltage barrier to the third electrode; and

wherein the substrate intermediate the first, second and third electrodes functions as a dielectric material such that a capacitive structure is formed.

Claim 29 has been amended to:

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29. A computer system, comprising:

- a data bus;
- a processor coupled to the data bus; and
- a modem coupled to the data bus, the modem comprising:
 - a circuit board having a substrate with a first side and a second side;
 - a capacitor having a first electrode formed on the first side of the substrate and
 - a second electrode formed on the second side of the substrate; and
 - a conductive via through the substrate;
- system side circuitry coupled to the first electrode, the system side circuitry configurable to communicate with the data bus; and
- line side circuitry coupled by the conductive via to the second electrode, the line side circuitry configurable to communicate with a telephone network;

wherein the system side circuitry and the line side circuitry are located on the first side;

wherein the capacitor comprises:

- a third electrode within the substrate;

wherein the first electrode formed on the first side of the substrate and the second electrode formed on the second side of the substrate are electrically connected by the conductive via through the substrate and the third electrode, wherein a high voltage barrier exists between the conductive via and the third electrode.

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Allowable Subject Matter

4. **Claims 1,3-9,11-22,24,25,27-31** are allowed over the prior art of record

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are **571-273-8300** for regular communications and **571-273-8300** for After Final communications.

AJ
July 21, 2005


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